

**IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE**

| | | |
|-------------------------------|---|------------------------|
| BRIDGESTONE SPORTS CO., LTD., |) | |
| and BRIDGESTONE GOLF, INC., |) | |
| |) | |
| Plaintiffs, |) | C. A. No. 05-132 (JJF) |
| |) | |
| v. |) | |
| |) | PUBLIC VERSION |
| ACUSHNET COMPANY, |) | |
| |) | |
| Defendant. |) | |

**ACUSHNET'S MEMORANDUM IN SUPPORT OF ITS
DAUBERT MOTION TO EXCLUDE PORTIONS OF
THE EXPERT TESTIMONY OF LARRY CADORNIGA**

OF COUNSEL:

Alan M. Grimaldi
Joseph P. Lavelle
Kenneth W. Donnelly
HOWREY LLP
1299 Pennsylvania Avenue, N.W.
Washington, DC 20004
Tel: (202) 783-0800

Richard L. Horwitz (#2246)
David E. Moore (#3983)
POTTER ANDERSON & CORROON
LLP
Hercules Plaza, 6th Floor
1313 North Market Street
P. O. Box 951
Wilmington, DE 19899-0951
Tel: (302) 984-6000
rhorwitz@potteranderson.com
dmoore@potteranderson.com

*Attorneys for Defendant
Acushnet Company*

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I. INTRODUCTION

Defendant Acushnet Company (“Acushnet”) moves, pursuant to Rule 702 of the Federal Rules of Evidence, to exclude the expert testimony of Larry Cadorniga regarding his opinion that *all* of the golf balls bearing the side-stamps identified in Exhibits E, F and G of his January 16, 2007 Expert Report infringe U.S. Patent Nos. 5,782,707 (‘the ‘707 patent’); 5,803,834 (‘the ‘834 patent’); and 6,679,791 (‘the ‘791 patent’), respectively and to limit the scope of this infringement opinion to the universe of balls tested by Dr. Edward Caulfield.

II. NATURE AND STAGE OF PROCEEDINGS

On April 13, 2007, the parties filed summary judgment motions. One of the motions Acushnet filed was a motion to exclude the expert testimony of Mr. Cadorniga relating to the ‘707 patent in its entirety. If the Court grants that motion, then this motion will be moot as it pertains to the ‘707 patent. However, the Court will still have to decide this motion as it relates to the ‘834 and the ‘791 patents. Trial is scheduled for June 18.

III. SUMMARY OF ARGUMENT

Mr. Cadorniga opines that Acushnet infringes Bridgestone’s ‘707, ‘834 and ‘791 patents. Specifically, in Exhibit E of his report, Mr. Cadorniga opines that *all* Acushnet Pro V1 golf balls bearing the side-stamps Pro V1 392, Pro V1 392 (stretched) and ◀Pro V1●392▶ infringe claim 1 of the ‘707 patent. In Exhibit F of his report, he opines that *all* Acushnet golf balls bearing the side-stamps ◀NXT▶, ◀-NXT-▶, DT So/Lo, ◀DT So/Lo▶, PTS So/Lo, ◀PTS So/Lo▶, Pinnacle Exception and Exception infringe claim 1 of the ‘834 patent. Further, in exhibit G of his report, Mr. Cadorniga opines that *all* Acushnet golf balls bearing the side-stamps ◀●Pro V1 392●▶, ◀Pro V1-392▶, ◀Pro V1x 332▶, and ◀Pro V1x -332▶ infringe claims 11, 13, 16 and 26 of the ‘791 patent. This amounts to hundreds of millions of balls.

Yet, in order to reach his opinion that *all* of these hundreds of millions of balls infringe, Mr. Cadorniga opines that the “number of samples of the accused Acushnet golf balls tested is more than sufficient to comprise a statistically significant sample.” Mr. Cadorniga’s expert opinion on this subject, which amounts to no analysis and is purely his ipse dixit, is inadmissible. Mr. Cadorniga has no background in statistical techniques to render any opinion regarding the statistical significance of a sample, or to render any opinion regarding the properties of all accused golf balls based upon the testing of these samples. Also, his methodologies are meaningless because he fails to perform any statistical analysis of his results and fails to consider balls that were properly sampled from the entire population of accused products. His opinion is nothing other than a layman’s speculative commentary that does not assist the trier of fact; and therefore inadmissible as expert testimony.

IV. STATEMENT OF THE FACTS

A. Mr. Cadorniga Admits He is Not a Statistician

Larry Cadorniga admits that he is not an expert in statistics. (*See* Ex. 3, 3/12/2007 Cadorniga Tr. at 19:1-3; 278:22 – 280:12). However, in his expert report, he purports to present “statistically significant” evidence that 100% of the Acushnet accused balls infringe Bridgestone’s patents. (*See, supra*, at IV. B, C and D). He simply relies upon testing performed by Dr. Caulfield in formulating his opinions, but he fails to provide any statistical analysis. (Ex. 2, 1/16/2007 Cadorniga Report at Exs. E, F. and G).

B. Mr. Cadorniga’s Flawed ‘707 Patent Infringement Opinion Was Detailed in Acushnet’s Summary Judgment Motion

Acushnet outlined the undisputed facts regarding Mr. Cadorniga’s ‘707 patent infringement opinion in its Motion for Summary Judgment of Non-Infringement, which is attached as Exhibit 1 to this motion, and incorporated herein by reference.

C. Mr. Cadorniga's Flawed '834 Patent Infringement Opinion

Claim 1 of the '834 patent requires a two-piece solid golf ball with a core and a cover where the core has a surface hardness up to 85 degrees, a center hardness that is lower than the surface hardness by not less than 8 to less than 20 degrees, and a hardness within 5 mm inside the core surface that is up to 8 degrees lower than the surface hardness, among other limitations.

In his January 16, 2007 report, similar to the '707, Mr. Cadorniga expressed his opinion that all Acushnet balls bearing the sidestamps ◀NXT▶, ◀-NXT-▶, DT So/Lo, ◀DT So/Lo▶, PTS So/Lo, ◀PTS So/Lo▶, Pinnacle Exception and Exception infringe claim 1 of the '834 patent. (See Ex. 2, Cadorniga 1/16/2007 Report at F-1). Again, similar to his '707 patent analysis, his opinion is fundamentally flawed because it is based only on the average hardness value of the balls measured by Dr. Caulfield without any further analysis.

Mr. Cadorniga admitted in his deposition that the only basis for his opinion that Acushnet infringes the "8-20 degree" limitation and the "within 5 mm" limitation of the '834 patent is the summary charts providing the average hardness values of the balls tested by Dr. Caulfield that Mr. Cadorniga included in his report. (Ex. 3, 3/12/2007 Cadorniga Tr. at 294:1 – 295:10). One of these charts is reproduced below:

| Sidestamp | Mean Core Surface Hardness (JIS-C) | Mean Core Center Hardness (JIS-C) | Difference |
|---------------------------|------------------------------------|-----------------------------------|------------|
| | <i>A</i> | <i>B</i> | <i>A-B</i> |
| ◀NXT▶ | 83.2 | 61.7 | 21.5 |
| ◀-NXT-▶ | 81.8 | 60.4 | 21.4 |
| DT So/Lo PTS SoLo | 85.3 | 63.1 | 22.2 |
| ◀DT So/Lo▶ ◀PTS So/Lo▶ | 82.1 | 61.8 | 20.3 |
| Pinnacle Exception | 83.5 | 61.0 | 22.5 |
| Exception | 79.1 | 62.0 | 17.1 |

Table F-3.

(Ex. 2, Cadorniga 1/16/2007 Report at F-7).

As can be seen, Mr. Cadorniga is plainly wrong. Table F-3 does not show that *all of the accused balls* have a difference in JIS-C hardness of at least 8 to 20 - Table F-3 actually shows that the average difference in hardness *of the balls Dr. Caulfield tested* do not meet the “8 to 20 degree” limitation, except for the ball with the Exception sidestamp. Mr. Cadorniga provides no explanation or analysis to bridge the gap between Dr. Caulfield’s averages and all of the accused products. Specifically, he does not explain (1) why the balls Dr. Caulfield tested are representative of the accused products, and (2) why Dr. Caulfield’s testing constitutes sufficient evidence to show the properties of all accused products.

Further, Table F-4 does not show that that *all of the accused balls* have a hardness “within 5 mm” of the core surface that is less than 8— Table F-4 shows that the *balls Dr. Caulfield tested had an average* difference within 5 mm of the core surface that was less than 8. Again, Mr. Cadorniga provides no explanation or analysis to bridge the gap between Dr. Caulfield’s averages and all of the accused products. (*See id.* at F-9)

D. Mr. Cadorniga’s Flawed ‘791 Patent Infringement Opinion

The asserted independent claim 11 of the ‘791 patent requires a multi-layer solid golf ball with a core, a cover and at least one intermediate layer. The primary hardness limitation requires a difference in JIS-C hardness of at least 22 between the center and the surface.

Again, as with the ‘707 and ‘834 patents, Mr. Cadorniga just assumes that all of the accused golf balls have the same hardness as the average value that Dr. Caulfield reported. For example, with regard to claim 11 of the ‘791 patent, he states that “Table G-5 [reproduced below] shows that all of the golf balls bearing the sidestamps ◀●Pro V1 392●▶, ◀Pro V1-392▶, ◀●Pro V1x 332●▶ and ◀Pro V1x-332▶ have an elastic core which has a difference in JIS-C hardness of at least 22 between the center and surface thereof.” (Ex. 2, 1/16/2007 Cadorniga Report at Ex. G, p. 19-20).

| Ball (Sidestamp) | Mean Core Surface Hardness (JIS-C) | Mean Core Center Hardness (JIS-C) | Mean Difference |
|------------------|------------------------------------|-----------------------------------|-----------------|
| ◀•Pro V1 392•▶ | 87.7 | 62.7 | 25.0 |
| ◀Pro V1-392▶ | 87.3 | 62.0 | 25.3 |
| ◀•Pro V1x 332•▶ | 93.5 | 63.1 | 30.4 |
| ◀Pro V1x-332▶ | 92.4 | 60.5 | 31.9 |

Table G-5

As can be seen, Mr. Cadorniga is plainly wrong again. Table G-5 does not show that *all of the accused balls* have a difference in JIS-C hardness of at least 22 – Table G-5 shows that the *average* difference in JIS-C hardness *of the balls Dr. Caulfield tested* was at least 22. Mr. Cadorniga provides no explanation or analysis to bridge the gap between Dr. Caulfield’s averages and all of the accused products. Specifically, he does not explain (1) why the balls Dr. Caulfield tested are representative of the accused products, and (2) why Dr. Caulfield’s testing constitutes sufficient evidence to show the properties of all accused products.

V. ARGUMENT

A. Daubert Standard

The Third Circuit has held that Rule 702 of the Federal Rules of Evidence provides three distinct substantive restrictions on the admission of expert testimony: qualifications, reliability, and fit. *See Elcock v. Kmart Corp.*, 233 F.3d 734, 741 (3d Cir. 2000); *In re Paoli R.R. Yard PCB Litig.*, 35 F.3d 717, 742 (3d Cir. 1994). The plaintiff must establish the expert’s qualifications and the reliability and fit of the proposed testimony by a “preponderance of proof.” *See Kerrigan v. Maxon Ind.*, 223 F. Supp. 2d 626, 630 (E.D. Pa 2002); *In re TMI Litig.*, 193 F.3d 613, 663 (3d Cir. 1999).

First, a proffered expert witness must possess skill or knowledge greater than the average layman. *See Waldorf v. Shuta*, 142 F. 3d 601, 625 (3d Cir. 1998).

Second, to be considered reliable, an expert’s opinion must be based on the “methods and procedures of science” rather than on “subjective belief or unsupported

speculation,” and the expert must have “good grounds” for his conclusions. *Calhoun v. Yamaha Motor Corp., U.S.A.*, 350 F.3d 316, 321 (3d Cir. 2003); Ex. 13, *Callaway Golf Co. v. Dunlop Slazenger Group Americas, Inc.*, C. A. No. 01-669-KAJ, 2004 WL 1534786 (D. Del. May 21, 2004). If the analytic gap between the data relied upon and the opinion proffered is simply too great, the opinion should be excluded. *General Electric Co. v. Joiner*, 522 U.S. 136, 142 (1997); *Oddi v. Ford Motor Co.*, 234 F.3d 136, 146 (Fed. Cir. 2000). Where there are “deficiencies in the foundation of the opinion,” the expert’s conclusions are “mere speculation” and inadmissible. *Concord Boat Corp. v. Brunswick Corp.*, 207 F.3d 1039, 1057 (8th Cir. 2000).

The third requirement is that the expert’s testimony fit, or that it assists the trier of fact. *See Oddi*, 234 F.3d at 145. But nothing in either *Daubert* or the Federal Rules of Evidence requires a district court to admit opinion evidence which is connected to existing data by only the *ipse dixit* of the expert. *General Electric*, 522 U.S. at 146.

B. Mr. Cadorniga’s Expert Testimony Regarding Infringement of the ‘707 Patent Should be Excluded

Acushnet addressed why Mr. Cadorniga’s opinion on infringement of the ‘707 patent should be excluded in its motion for summary judgment. (*See* Ex. 1 at 13-25).

C. Mr. Cadorniga’s Expert Testimony Regarding the Infringement of the ‘834 and ‘791 Patent Should be Excluded

1. Mr. Cadorniga Is Not Qualified to Issue His Opinion

Mr. Cadorniga had no basis - and provided no analysis - in rendering his opinion that the “number of samples of the accused Acushnet golf balls tested is more than sufficient to comprise a statistically significant sample” for either the ‘834 or ‘791 patents. Mr. Cadorniga is not qualified to testify that Dr. Caulfield’s testing constitutes statistically significant proof of the properties of all of the accused Acushnet golf balls.

Mr. Cadorniga admits that he is not an expert in statistics, and has not had any formal coursework in statistics outside of one executive education class on “general concepts.” (See Ex. 3, 3/12/2007 Cadorniga Tr. at 19:1-3; 278:22 – 280:12). He did not consult with Dr. Caulfield, or any other expert regarding the statistical significance of these tests when formulating his opinions. (See *id.* at 278:5 - 278:13). Therefore, he should be barred from describing Dr. Caulfield’s test results as proof of infringement of all the hundreds of millions of accused Acushnet balls that are accused of infringing claim 1 of the ‘834 patent and claims 11, 13, 16 and 26 of the ‘791 patent.


2. Mr. Cadorniga’s Opinions are Unreliable

Also, Mr. Cadorniga bases his entire opinion on a “mean value” analysis, in which he compares the average hardness gradient measured on Dr. Caulfield’s tests samples with the claimed range. (See Ex. 3, 3/12/2007 Cadorniga Tr. at 290:11 – 292:6). Again, however, Mr. Cadorniga has provided no explanation for this analysis or why it is appropriate in this context. It is not.

Mr. Cadorniga’s “mean value” analysis is meaningless in the field of statistics and is a method of his own creation. He provides no evidence that his methodology has been “subjected to peer review” as required in the Third Circuit. See *In re Paoli*, 35 F.3d at 742. Mr. Cadorniga’s “mean value” ignores test data showing hardness gradients literally over 20 in connection with the ‘834 patent, and has been criticized by Dr. Sutton, Acushnet’s statistical expert, as incorrect and inappropriate. Mr. Cadorniga’s expert report is nothing more than an account of the examination of the golf balls tested by Dr. Caulfield, not “an informative explanation of the methods upon which he relied to test his theory that” all of the accused golf balls have a hardness gradient between 8 and 20, or a hardness of less than 8 degrees within 5 mm of the core surface, or a hardness gradient of at least 22. See *Kerrigan v. Maxon Ind.*, 223 F.Supp.2d 626, 638 (E.D. Pa 2002),

(rejecting an expert's extrapolation from observations of one device to a theory regarding the behavior of a proposed new design).

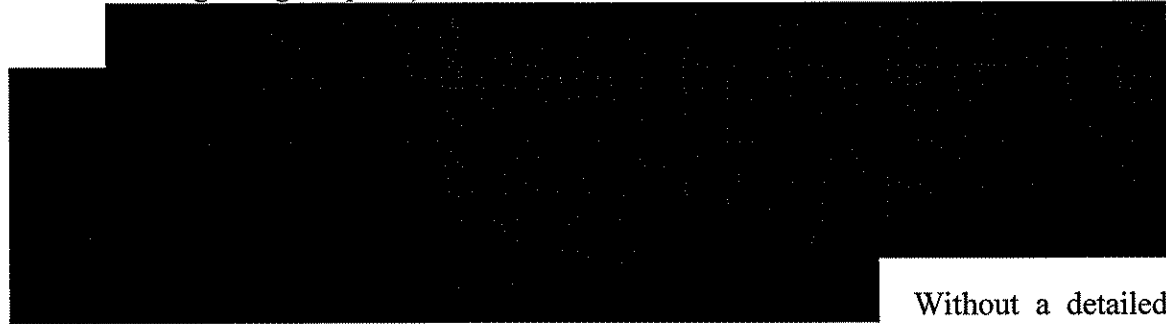
Mr. Cadorniga has done nothing to show that the balls that Dr. Caulfield tested are representative of the entire population of accused golf balls. It is essential that the golf balls tested by Dr. Caulfield be representative of all of the accused products – otherwise it is impossible to extrapolate the results of those tests to all of the accused products. (See Ex. 4, 2/20/2007 Sutton Report at ¶ 15). However, Mr. Cadorniga admits that when he wrote his expert report, he did not know how the balls that Dr. Caulfield tested were obtained. (See Ex. 3, 3/12/2007 Cadorniga Tr. at 284:6 – 284:8). In fact, Dr. Caulfield testified that there was no sampling plan for selecting the balls he tested. (Ex. 5, 3/29/2007 Caulfield Tr. at 79:15 -79:22).



Moreover, according to Bridgestone's own experts¹, many manufacturing variables impact the size of the hardness gradient in a particular golf ball core. (See Ex. 9, March 15, 2007 Calabria Tr. at 65:18 - 65:20; 69:4 - 69:9; 71:12 - 73:7; 264:2 - 271:6; see also Ex. 10, 2/20/2007 Calabria Report at ¶47; App. C, ¶¶ 24-27 (e.g., chemistry employed in preparing the rubber, the time and temperature, size, number shape and

¹ For purposes of this motion, Acushnet assumes that Bridgestone's experts are correct.

layout of the cavities, pressure, core size, sequencing of materials when mixed, and information regarding the press).



Without a detailed understanding of a particular core's manufacturing process, Bridgestone's experts testified that one cannot assume what the hardness is at an internal point of that core relative to its surface without testing that particular point. (See Ex. 3, 3/12/2007 Cadorniga Tr. 235:3-235:11). However, that is exactly what Mr. Cadorniga has done - simply assumed that the results Dr. Caulfield obtained applied to hundreds of millions of balls without providing any analysis for that conclusion.

Mr. Cadorniga's assumption that all of the accused Acushnet balls infringe the asserted claims of the '834 and '791 patents is the "subjective belief" and "unsupported speculation" that Rule 702 is designed to prevent. See *Calhoun*, 350 F.3d at 321; Ex. 13, *Callaway*, 2004 WL 1534786.

3. Mr. Cadorniga's Opinions Do Not Fit

Without offering any reliable basis to rely on Dr. Caulfield's testing, Mr. Cadorniga's "opinion" with regard to the '834 and '791 patents amounts to nothing more than a commentary upon the weight that should be accorded to evidence already in the record - to wit, Dr. Caulfield's reports and Acushnet documents. A simple review of the numbers already in evidence, without any kind of statistical or mathematical analysis, does not demonstrate any skill or technique different from a layperson. Ex. 14, *Ortiz v. Yale Material Handling Corp.*, C.A. No. 03-3657-FLW, 2005 U.S. Dist. LEXIS 18424 at *19-*30, (D. Del. 2005) (excluding an expert report that based its findings upon tests

performed by a third party without using any methodology or analysis). His opinion serves no purpose other than to confuse the jury by according unnecessary credence to documents and testing already in evidence. This is an inappropriate subject of expert testimony and it does not fit with the issues of this case. Thus, Mr. Cadorniga's report should be excluded.

VI. CONCLUSION

For the foregoing reasons, Acushnet respectfully requests the Court grant its motion to exclude the portions of the expert testimony of Larry Cadorniga identified above and limit the scope of his infringement opinion to the universe of balls tested by Dr. Edward Caulfield.

POTTER ANDERSON & CORROON LLP

OF COUNSEL:

Alan M. Grimaldi
Joseph P. Lavelle
Kenneth W. Donnelly
HOWREY LLP
1299 Pennsylvania Ave., N.W.
Washington, DC 20004
Telephone: (202) 783-0800

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By: /s/ David E. Moore
Richard L. Horwitz (#2246)
David E. Moore (#3983)
Hercules Plaza, 6th Floor
1313 N. Market Street
P.O. Box 951
Wilmington, DE 19899-0951
(302) 984-6000
rhhorwitz@potteranderson.com
dmoore@potteranderson.com

*Attorneys For Defendant
Acushnet Company*

**IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE**

CERTIFICATE OF SERVICE

I, David E. Moore, hereby certify that on May 15, 2007, the attached document was hand delivered to the following persons and was electronically filed with the Clerk of the Court using CM/ECF which will send notification to the registered attorney(s) of record that the document has been filed and is available for viewing and downloading:

Jack B. Blumenfeld
Maryellen Noreika
Leslie A. Polizoti
Morris, Nichols, Arsht & Tunnell
1201 N. Market Street
Wilmington, DE 19801

I hereby certify that on May 15, 2007, I have Electronically Mailed the documents to the following:

Robert M. Masters
Paul, Hastings, Janofsky & Walker LLP
875 15th Street, N.W.
Washington, D.C. 20005
RobMasters@paulhastings.com

/s/ David E. Moore
Richard L. Horwitz
David E. Moore
Potter Anderson & Corroon LLP
Hercules Plaza – Sixth Floor
1313 North Market Street
P.O. Box 951
Wilmington, DE 19899-0951
(302) 984-6000
rhowitz@potteranderson.com
dmoore@potteranderson.com